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THE PATENT OFFICE

PATENT NO. 554,052 ISSUED MAR. 11, 1958

Portable Goose-Neck Lamp

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Application October 15, 1953, Serial No. 655,367
2 Claims

1 This invention relates to lamps, and more particularly has reference to a lamp of the portable type, having a goose neck formation.

Among important objects of the present invention are the following:

First, the provision of a lamp of the type stated the versatility and general utility of which will be substantially greater than other portable lamps now in use;

Second, the provision of a lamp which can be supported at any of a wide number of locations, and which can be so arranged on its support as to make maximum use of the light beams cast thereby;

Third, to provide a lamp which will be sturdy, compact, water-proof, and so formed as to be capable of being left in an "on" position for a long period of time;

Fourth, to provide a lamp which, when not in use, can be compactly folded as to be capable of storage in a minimum of space; and

Fifth, to provide a lamp that can be manufactured at relatively low cost, considering the benefits to be obtained from the use thereof.

Other objects will appear from the following description, the claims appended thereto, and from the annexed drawings, in which like reference characters designate like parts throughout the several views, and wherein:

Figure 1 is a side elevational view of a lamp formed in accordance with the present invention, a portion of the lamp being shown in section;

Figure 2 is a front elevational view in which the lower portion of the lamp case has been broken away;

Figure 3 is an enlarged section taken substantially on line 3-3 of Figure 1, showing the construction at the outer end of the flexible tube;

Figure 4 is a section taken substantially on line 4-4 of Figure 2, showing the construction at the lower end of the tube, where said tube is connected to the case;

Figure 5 is a side elevational view of the lamp on a reduced scale, showing the lamp as it appears when mounted upon the side of a boat, said boat being shown fragmentarily and in section; and

Figure 6 is an elevational view of the lamp showing the lamp as it appears when supported on the ground surface.

Referring to the drawings in detail, the lamp constituting the present invention includes a box-like case 10, said case being relatively elongated, and being square or rectangular in cross section. At its lower end, the case 10 is permanently closed, but at its upper end, the case is formed open, to receive a cover 12 of frusto-conical

2 formation having a depending, peripheral flange 14 engaging said open end of the case 10 tightly, so as to prevent the admission of water into the interior of the case, and connected to the case by screws 15.

At the upper, small end of the cover 12, said cover is provided with a center opening 16, and engaged in said opening is the base of a cup-like, externally threaded neck 18 having a center opening 20 in its closed lower end. A circumferential groove 22 is formed in the side wall of the cup-like neck 18, at said base end of the neck, and receives the edge portion of the opening 16 of the cover 12, the joint between the cover 12 and the neck 18 preferably being made suitably tight to prevent the admission of water or dampness into the case through the opening of the cover. It will be understood, in this connection, that sealing gaskets could, if desired, be provided at the location of the joint between the neck 18 and cover 12, and at the location of the joint between the flange 14 and case 10. This, it is thought, is sufficiently obvious as not to require special illustration herein.

With the neck 18 I provide a coiled compression spring 24, for a purpose to be made apparent hereinafter, said spring engaging the base or bottom wall of the neck 18, at one end of the spring.

A "hot" or positive first upstanding lead 26 extends through the opening 20 of the neck 18, the spring 24 being circumposed about one end of said lead. The lead 26 has its other end extended downwardly into the case 10, and connected in a suitable manner to the positive post 28 of a dry cell 30 of selected voltage, said dry cell being supported within and substantially filling the case 10.

To the negative post 32 of the dry cell there is connected one end of a lead 34, the other end of which is connected to a switch 36 of conventional construction mounted in the wall of the cover 12. The switch 36 has connected to its other terminal one end of a conductive plate 38, said plate being connected fixedly to an insulation member 40 mounted upon the inner surface of the cover 12 and underlying that portion of the cover on which the switch 36 is mounted.

The conductive plate 38, as will be seen from Figure 4, is connected to the underside of the base of the neck 18, said neck 18 also being of an electrically conductive material.

Within the neck 18 I provide a collar 42 of insulation material, said collar being shiftable

3

axially of the neck, and being biased within the neck in a direction away from the cover 12, by the other end of the spring 24.

The collar 42 is provided with a center opening, receiving the lead 26, that end of the lead 26 extending through said center opening of the collar 42 being provided with a first conductive head 44. Thus, the conductive head 44 is spring biased outwardly of the neck 18 by the spring 24.

The head 44 is urged against a second conductive 46 positioned in abutting relation to a collar 48 of insulating material, mounted upon the lower or inner end of a second upstanding lead 50, a spring 52 being engaged against the collar 48, for the purpose of biasing the head 46 of the lead 50 into engagement with the head 44 of the lead 26. Spring 52 is disposed within an inverted cup 54 having at its open, lower end, an outwardly directed peripheral flange 56 engaged tightly against the open, upper end of the neck 18 through the provision of a spanner nut 58 that is threadedly connected to the neck, and has a knurled surface.

Secured fixedly in any suitable manner to the outer surface of the cup 54 is the lower end of an elongated, flexible tube 60, the upper end of said tube receiving and being fixedly connected to the base of a sleeve-like lamp socket 62. The lamp socket 62, at its base end, is provided with an end wall having an opening 64 through which the upper end of the lead 50 extends, a spring 66 being engaged at one end against said end wall and exerting pressure outwardly of the lamp socket against a collar 68 of insulating material. The lead 50 extends through the collar 68, and is provided on the upper end with a third conductive head 70 which, by reason of the pressure of the spring 66, is biased against the terminal of a conventionally formed lamp bulb base 72, said bulb being designated by the reference numeral 74.

That end of the socket 62 remote from the end wall of said socket has internal threads 76 engaged with the base 72 of the bulb 74. Thus, it will be seen that assuming that the switch 36 is in an "on" position, an electrical circuit will be closed from the source 30 through lead 26, lead 50, lamp bulb 74, and back through ground, the ground comprising the conductive lamp socket 62, the tube 60, the cup 54, neck 18, and conductive plate 38.

As will be noted from Figure 3, the lamp socket 62 is provided, intermediate its ends, with an integral, outwardly directed annular flange 78, said flange abutting against the cylindrical neck 80 of a tapered reflector 82, the neck of said reflector having a threaded opening receiving a set screw 84, said set screw being engageable against the side wall of the lamp socket 62 for the purpose of detachably but fixedly securing the reflector 82 to the lamp bulb socket.

The reflector 82, as best shown in Figure 1, is provided with a concavo convex lens 83, said lens being engaged in the larger end of the reflector by the conventional clamping ring used in the art.

Mounted upon the exterior surface of the side wall of the case 10 is a sleeve 86, formed open at its opposite ends, said sleeve being fixedly secured to the case and being adapted to receive an elongated, straight leg 88 of an angular mounting bracket 90, said bracket being formed at its upper end with a lateral extension. It will thus be seen that the lamp constituting the present invention can be supported upon the ground surface G (Figure 6), the leg 88 being

4

pointed at its lower end so as to be extendable into the ground surface with a minimum of difficulty. Additionally, the leg 88 could be engaged in any other material, and could, for example, be driven into a log, board, or other article on which it is desired to support the lamp during use thereof.

When the lamp is not in use, a spring clamp 92 mounted upon the side wall of the case 10 adjacent the cover 12 is adapted to receive the lateral extension on the upper end of the mounting bracket, in a manner best shown in Figure 2.

Additionally, the lamp is provided with means spaced from the mounting bracket, that affords a support or hanger bracket, whereby the lamp can be hung on a hook or other projection. To this end, I provide (see Figure 1) a hanger bracket 94 secured by rivets or equivalent fastening elements 96 to the side wall of the case 10, and having an outwardly offset lower end 98 adapted to be engaged over a hook or other projection, not shown.

On the flange 14 of the cover 12, I provide a ring 100, and on the reflector 82 I provide a hook member 102, the ring or eye 100 being adapted to receive the hook member 102 in a manner that permits the flexible tube 60 to be folded upon itself, thus to permit the entire device to be stored in a compact area, as for example, within or upon the outer surface of a tackle box or the like, not shown.

The lamp is additionally formed for support upon the side of a boat B, if desired, and to this end (see Figure 5), a C clamp 104 can be employed, said clamp engaging the side of the boat, and having a support ring 106 into which the outwardly offset lower end 98 of the bracket 94 can be extended.

I believe that it will be apparent, from the description provided and from the drawings annexed hereto, that the device is one which has a wide range of utilitarian functions. For example, the lamp can be used as a trouble light to be carried in an automotive vehicle and when so used, can be supported upon a roadway, with the tube 60 permitting the beams cast by the bulb 74 to be focused on any part of the automotive vehicle. If, for example, it is desired to make repairs at night upon the vehicle engine, the device can be hooked upon a suitable structural member located in the engine compartment of the vehicle, and again, the lamp beams can be focused or directed to the part of the engine on which the repairs are to be performed.

Additionally, the lamp has value in camping, hunting, or fishing expeditions, and can be attached to the side of a boat in the manner illustrated in Figure 5, so as to cast its beams either within or without the boat as desired. Many other uses, I believe, will suggest themselves.

It is considered to be an important characteristic of the invention, that the arrangement wherein the several parts are connected to one another makes the lamp substantially water-proof and gives the lamp a high degree of resistance to the elements.

It believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles of operation and the means presently devised to carry out said principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claims.

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The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A portable lamp comprising a case open at its top, a cover closing the open top of said case, a neck projecting from said cover, an inverted cup superimposed upon and supported on said neck, a source of electrical power having at least two terminal posts disposed within said case, a flexible tube having one end surrounding and connected to said cup, a lamp socket carried by the other end of said tube, a lamp bulb having a terminal in its base mounted in said socket, a first upstanding lead extending into said neck and having the lower end connected to one of the terminal posts of said source, the upper end of said lead being adjacent the lower end of said cup, a first conductive head carried by the upper end of said lead, a first collar formed of insulation material surrounding and slidable on the portion of said lead inwardly of said head and movable axially of said neck, a second upstanding lead positioned within said tube and having the lower end portion extending loosely into said cup, a second conductive head carried by the lower end of said conductive lead, a second collar formed of insulating material surrounding and slidable on the lower end portion inwardly of said second head and movable axially of said cup, separate spring means operatively connected respectively to said first collar and said neck and to said second collar and said cup for urging said first and second conductive heads into abutting engagement, a third conductive head on the upper end of said second lead and being engaged by the lamp bulb terminal, another spring means operatively connected to said third conductive head for urging the last mentioned head into abutting engagement with said lamp bulb terminal, and switch means operatively connected between one of said posts of said source and said lamp socket.

2. A portable lamp comprising a case open at its top, a cover closing the open top of said case, a neck projecting from said cover, an inverted cup superimposed upon and supported on said neck, a source of electrical power having at least

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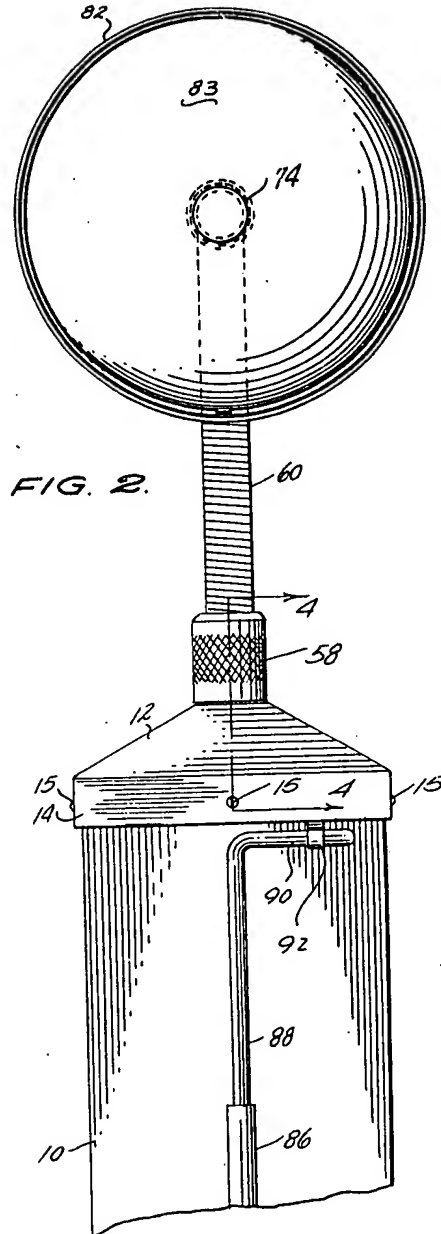
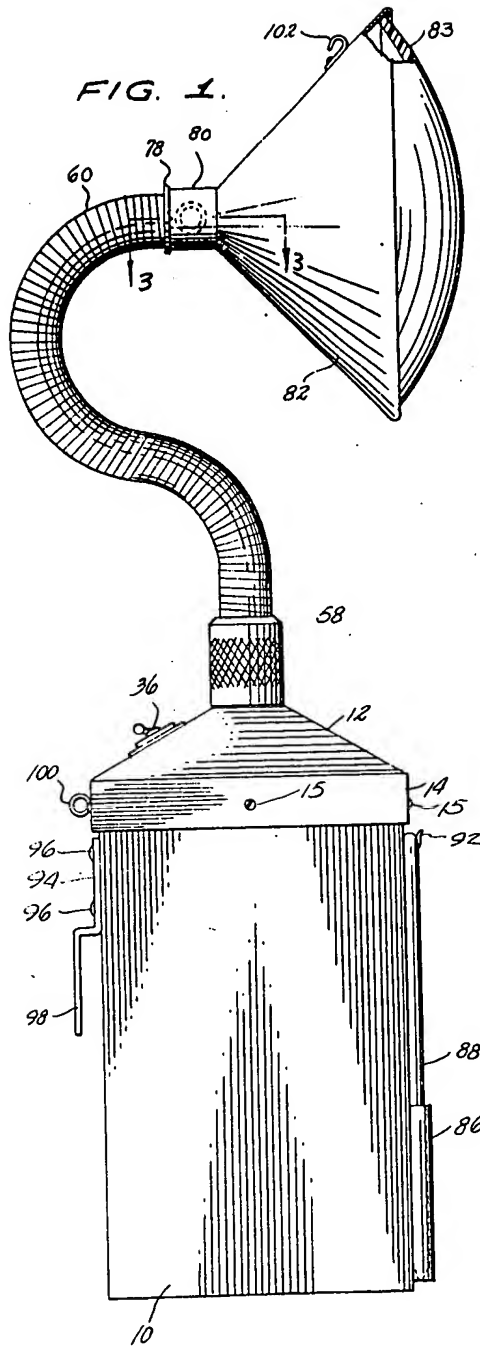
two terminal posts disposed within said case, a flexible tube having one end surrounding and connected to said cup, a lamp socket carried by the other end of said tube, a lamp bulb having a terminal in its base mounted in said socket, a first upstanding lead extending into said neck and having the lower end connected to one of the terminal posts of said source, the upper end of said lead being adjacent the lower end of said cup, a first conductive head carried by the upper end of said lead, a first collar formed of insulation material surrounding and slidable on the portion of said lead inwardly of said head and movable axially of said neck, a second upstanding lead positioned within said tube and having the lower end portion extending loosely into said cup, a second conductive head carried by the lower end of said conductive lead, a second collar formed of insulation material surrounding and slidable on the lower end portion inwardly of said second head and movable axially of said cup, a separate spring means operatively connected respectively to said first collar and said neck and to said second collar and said cup for urging said first and second conductive heads into abutting engagement, a third conductive head on the upper end of said second lead and being engaged by the lamp bulb terminal, another spring means operatively connected to said third conductive head for urging the last mentioned head into abutting engagement with said lamp bulb terminal, and switch means operatively connected between one of said posts of said source and said lamp socket.

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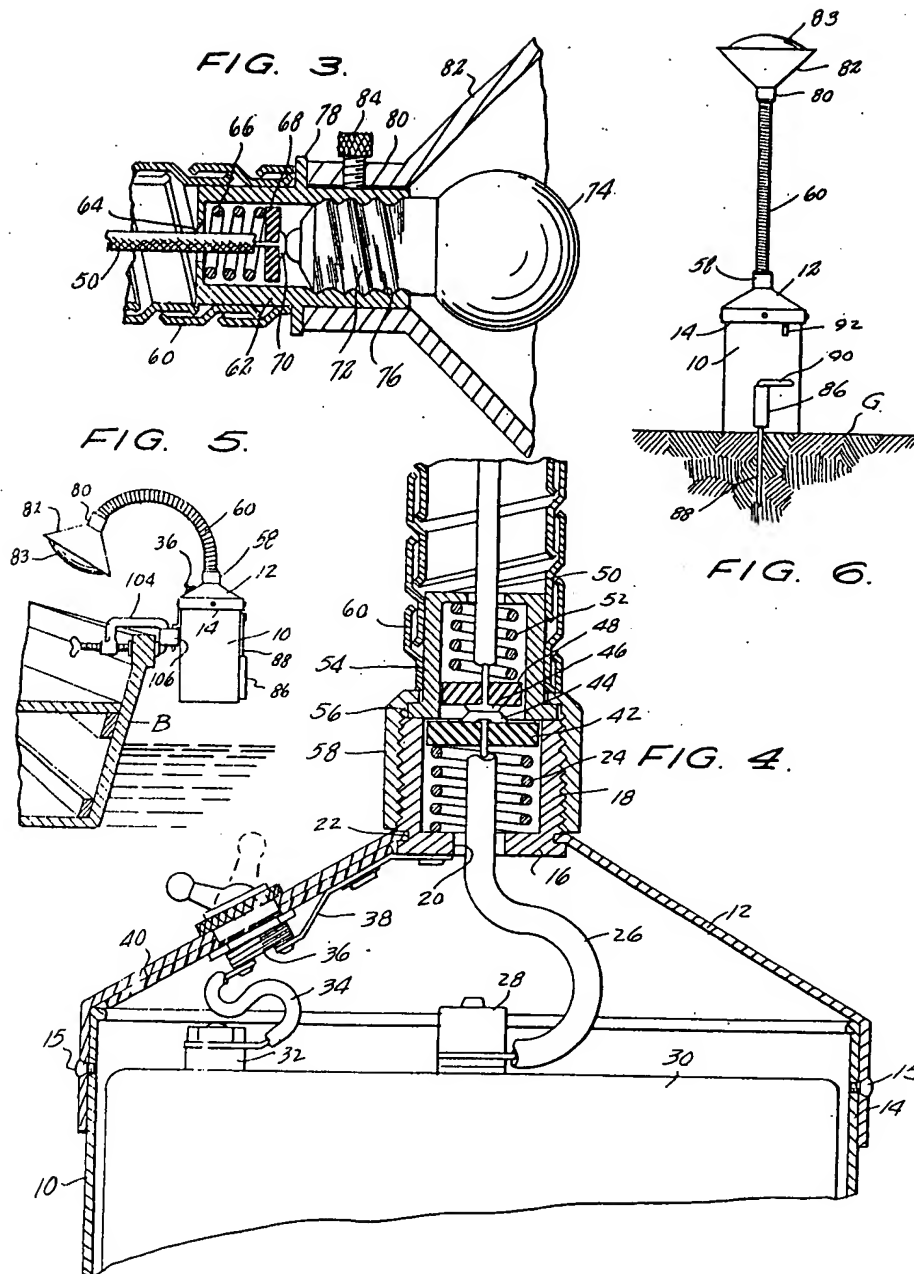
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